

FR-A-1 258 458 presents a silencer according to the type, consisting of a gas-conducting pipe with openings of defined cross-section and of defined wall height, arranged in a silencer housing in such a manner that it runs through an axial sequence of silencer housing chambers insulated gastight from each other, into which the openings of the pipe open communicatively, whereby the volumes of all chambers of the silencer housing in connection with the defined openings specifications of all openings of the communicatively arranged openings of a silencer housing chamber of the pipe are tunable to an interference frequency band from the noise spectrum of the exhaust gas which is to be respectively damped, and the pipe can be run through the silencer housing chambers such that it passes through each of the silencer housing chambers at least twice, with minimal dissipation losses. Thus the known exhaust silencer comprises in one housing multiple chambers, through which a U-form exhaust pipe passes in such a manner that the exhaust pipe runs through two chambers at least twice, whereby by means of openings in the exhaust pipe, which effect a connection of the interior of the exhaust pipe to the respective chambers, each of these chambers represents a Helmholtz resonator. These Helmholtz resonators may be tuned by means of the number and size of the openings in the respective chambers. A disadvantage of the exhaust silencer known in FR-A-1 258 458 is however, that it is not universally utilizable, but rather requires a new construction for the application of each respective silencer characteristic by means of a new design of the chamber sizes and the openings characteristics.

The task of the current invention is thus to further develop the exhaust silencer of this type in such a manner that the disadvantages of the state of the art are overcome, especially to make the silencer broadband tunable and to render it utilizable in automotive technology. At the same time there should be a good level of sound dampening and at the same time the possibility